REMARKS

This application pertains to a novel mass transfer apparatus.

Claims 1 to 11 and 13-22 are pending; claim 12 being canceled by this amendment. The limitations of claim 12 have been added to claim 1, thereby making claim 1 an independent form of original claim 12.

The Examiner has objected to the Abstract, as including legal phraseology often used in claim language. The abstract has now been amended and is believed to be in proper form. Although the word "comprising" remains in the abstract, Applicants believe that the usage of this word is helpful in providing a meaningful abstract, and is properly used in the abstract. The mere fact that this word may be considered to be "legal phraseology" does not render its use in an abstract objectionable. It is respectfully requested that the Examiner give favorable consideration to the amended abstract, and withdraw her objection.

The drawings stand objected to as not providing an illustration of the features specified in claims 20-22. Applicants annex proposed new figures 11 and 12, which are based on original figure 1, but with the missing heat jacket added and identified by designating line 20. In figure 11, an inlet(lower left) and outlet (upper right) are shown, through which a heat transfer medium can flow into and out of the heat transfer jacket. Proposed figure 11 therefore illustrates the features of claims 20 and 22. Proposed figure 12, on the other hand, illustrates an electrical heater (21) within the jacket (20), thereby illustrating the features of claim 21.

If the Examiner will indicate her approval of the proposed additional drawings, formal drawings will be submitted to the Official Draftsperson.

Claims 1-22 stand rejected under 35 U.S.C. 112, second paragraph, for various reasons more specifically indicated in the Office Action. Applicants have carefully considered the reasons given by the Examiner for this rejection, and have made appropriate amendments in response. The amendments, together with the following comments, are believed to overcome this rejection.

With respect to issue "g" on page 3 of the office action, Applicants believe that the expression "adapted to" is proper in this apparatus claim. The claim is directed to an apparatus having a heat transfer jacket which is designed to accommodate the flow of a heat transfer medium. Thus, the apparatus itself is defined as being "adapted to accommodate" the flow. This is a feature of the apparatus itself, and it is not necessary, or even proper, to recite that the heat transfer medium is or is not actually flowing through it, as such would constitute a process limitation. The limitations describe the apparatus in and of itself, and the expression "adapted to" is commonly used in apparatus claims. Thus, when the apparatus is built and sold, it is "adapted to" accommodate the flow of a heat transfer medium, even though there will not be any heat transfer medium flowing through it until it is installed in a process and started up.

It is believed that the amendments made to the claims, together with the foregoing comments, overcome the 35 U.S.C.112, second paragraph rejection, and this rejection should accordingly now be withdrawn.

Turning now to the art rejections, Claims 1-10 and 13-19 stand rej cted under 35 U.S.C. 103(a) as obvious over DE 2 243 024 in view of Melvill (US 2,490,080). Applicants have carefully studied both references, and do not believe that there is any that they could be combined at all without destroying the inventive concept of each. In addition, there is simply no way that the features of these two references could be combined to re-create Applicants' claimed apparatus or method. What parts, for example, of Melvill would the Examiner substitute for what parts of the DE reference, and how would she assemble them?

Notwithstanding the clear differences between Applicants' apparatus and anything that could be derived from any combination of the DE reference and the Melvill reference, Applicants note with appreciation that claims 11 and 12 would be allowable if amended into independent form.

Now, in a determined effort to advance the prosecution of this application, Applicants have amended claim 1 into an independent form of claim 12. The limitations of amended claim have been incorporated into claim 17, which is now presented in independent form, as suggested by the Examiner. All the other claims depend from either claim 1 or claim 17.

It is therefore believed that the rejection of claims 1-10 and 13-19 under 35 U.S.C. 103(a) as obvious over DE 2 243 024 in view of Melvill has been overcome, and should now be withdrawn.

Claims 20-22 stand rejected under 35 U.S.C. 103(a) as obvious ov r DE 2 243 024 in view of Melvill and further in view of Kimoto (3,694,535) or Miller

(4,130,527). The differences between the present invention and the DE '024/Melvill combination of references has been explained above. Nothing that can be found in Kimoto and/or Miller can overcome these differences. More to the point, however, the claims all now incorporate the limitations of claim 12, which the Examiner has found allowable. Accordingly, the rejection of Claims 20-22 under 35 U.S.C. 103(a) as obvious over DE 2 243 024 in view of Melvill and further in view of Kimoto (3,694,535) or Miller (4,130,527) should now be withdrawn.

The objection to claims 11 and 12 is believed overcome by the amendment of claim 1 to an independent form of Claim 12, with claim 11 being dependent from said amended claim 1. The objection to claims 11 and 12 should accordingly now be withdrawn.

In view of the present remarks it is believed that claims 1-11 and 13-22 are now in condition for allowance. Reconsideration of said claims by the Examiner is respectfully requested and the allowance thereof is courteously solicited.

Respectfully submitted,
NORRIS, McLAUGHLIN & MARCUS

By _____
William C. Gerstenzang
Reg. No. 27,552

WCG/tmh

220 East 42nd Street - 30th Floor
New York, New York 10017
(212) 808-0700

I hereby certify that this correspondence is being transmitted via facsimile addressed to Commissioner for Patents, P.O. Box 1450, Arlington, VA 22313-1450 on October 23, 2003

William A. Munck

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